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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,890	07/15/2003	David M. Forman	BRI/023	7696

7590 08/09/2004

Thomas J. Brindisi, Esq.
Suite B
20 28th Place
Venice, CA 90291

EXAMINER

GREENE JR, DANIEL LAWSON

ART UNIT PAPER NUMBER

3641

DATE MAILED: 08/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/619,890

Applicant(s)

FORMAN ET AL.

Examiner

Daniel L. Greene Jr.

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
4a) Of the above claim(s) 2,6,8,9 and 16-21 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,3-5,7 and 10-15 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Invention II, species A, subspecies c (continuity check module), species ii, as drawn to claims 1, 3-5, 7 and 10-15, in the reply filed on 7/28/2004 is acknowledged. The traversal is on the ground(s) that applicant claims MPEP 806.05(e) is not satisfied because:

- A. the prior art cited is non analogous,
- B. that there is no basis for the inventions to be classified in different classification and,
- C. that subspecies b. and c. (applicant renamed to a. and b.) from the 7/22/2004 Office Action do not appear to be proper.

2. This is not found persuasive because:

- A. merely proposing that the prior art cannot be operated in such a manner does not preclude such,
- B. MPEP 806.05(e) required the invention to be distinct and classified separately in the art, which the examiner has done and,
- C. In regard to the species restrictions, it is unclear why applicant argues that subspecies b. and c. (applicant renamed to a. and b.) do not appear to be proper species under species A or B, since paragraph 0051 of the disclosure clearly states that the continuity check performed by the electronic circuitry (ASIC) "can be...accomplished for example...", implying that there are other methods of performing a continuity check,

which do not include a resistance check. Applicant further distinguishes between a resistance check module and a continuity check module by presenting separate claims disclosing such. It is clear that a continuity check or resistance check module applies to both figures 1 and 2 and therefore species A and B. If applicant is stating that the subspecies are obvious variants of one another, applicant should state so on the record and cancel the redundant claim.

The requirement is still deemed proper and is therefore made FINAL.

3. Claims 2, 6, 8, 9, and 16-21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention and species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 7/28/2004.
4. This application contains claims 2, 6, 8, 9, and 16-21 drawn to an invention nonelected with traverse in the reply filed on 7/28/2004. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.
5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Response to Arguments

6. Applicant's arguments filed 4/22/2004 have been fully considered but they are not persuasive.

7. In response to applicant's argument that U.S. Patent 6,166,452 to Adams et al., hereafter Adams, is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the applicant is concerned with initiating an explosive charge with an electric signal such as the case with Adams.

8. In response to applicant's argument that amending the claims by adding the limitation "for use in mining or blasting" to claims 1-11 patentably distinguishes over the prior art, the Office offers the following, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Regardless of applicant's declaration filed 4/22/2004 and as more fully outlined below, Adams is "capable of performing the intended use" and therefore meets the claims.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. **Claims 1, 3-5, 7 and 10-15 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. Patent 6,166,452 to Adams et al., hereafter Adams.**

In regards to claim 1, Adams clearly discloses, an electronic detonator having firing-readiness diagnostics, comprising an igniter (10) and electronic circuitry (59) configured and/or programmed to perform one or more firing-readiness diagnostics on the electronic detonator, in figures 2, 3, 5-7, and 10, column 2 lines 59-60, column 3 lines 62-67, column 4 lines 1-12, lines 14-16, lines 55-57, and lines 64-67, column 5 lines 1-6 and lines 24-32.

In regards to claim 3, Adams inherently discloses, wherein the electronic detonator includes an ignition element (55), and the electronic circuitry comprises a continuity check module, in the rejection of corresponding parts of claim 1, above.

In regards to claim 4, Adams clearly discloses, wherein the electronic detonator includes an ASIC that contains the circuitry, in the rejection of corresponding parts of claim 1, above.

In regards to claim 5, Adams clearly discloses, wherein the igniter is hermetically sealed, and the ignition element is a bridgewire, in figures 1-5, column 2 lines 59-60 and lines 66-67, column 3 lines 1-6, lines 11-54, column 4 lines 25-34, column 6 lines 9-33 and lines 40-51.

In regards to claim 7, Adams inherently discloses, wherein the igniter includes a firing capacitor (56), and the electronic circuitry is configured and/or programmed to verify that the firing capacitor has a capacitance above a first value and below a second value, in figure 7, column 4 lines 59-61, and column 5 lines 24-32 and lines 58-65.

In regards to claim 10, Adams inherently discloses, wherein the igniter further includes an ignition element (55), and the electronic circuitry includes a continuity check module, in the rejection of corresponding parts of claim 1, above.

In regards to claim 11, Adams clearly discloses, wherein the igniter is hermetically sealed, and the ignition element is a bridgewire, in figures 1-5, column 2 lines 59-60 and lines 66-67, column 3 lines 1-6, lines 11-54, column 4 lines 25-34, column 6 lines 9-33 and lines 40-51.

In regards to claim 12, Adams clearly discloses, an electronically connected system comprising: a master device (ECU), a bus connected to the master device, and a plurality of electronic detonators connected to the bus, each of the electronic detonators comprising an igniter (10) and electronic circuitry (59) configured and/or programmed to perform one or more electronic detonator firing-readiness diagnostics, in figures 2, 3, 5-7, and 10, column 2 lines 59-60, column 3 lines 62-67, column 4 lines 1-12, lines 14-16, lines 55-57, and lines 64-67, column 5 lines 1-6, lines 13-18, and lines 24-32.

In regards to claim 13, Adams inherently discloses, wherein the igniter includes a firing capacitor (56), and the electronic circuitry is configured and/or programmed to

verify that the firing capacitor has a capacitance above a first value and below a second value, in figure 7, column 4 lines 59-61, and column 5 lines 24-32.

In regards to claim 14, Adams inherently discloses, wherein the igniter further includes an ignition element (55), and the electronic circuitry includes a continuity check module, in the rejection of corresponding parts of claim 12, above.

In regards to claim 15, Adams clearly discloses, wherein the igniter is hermetically sealed, and the ignition element is a bridgewire, in figures 1-5, column 2 lines 59-60 and lines 66-67, column 3 lines 1-6, lines 11-54, column 4 lines 25-34, column 6 lines 9-33 and lines 40-51.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel L Greene Jr. whose telephone number is (703) 605-1210. The examiner can normally be reached on Mon-Fri 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J Carone can be reached on (703) 306-4198. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DIG 8/4/2004

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JACK KEITH
PRIMARY EXAMINER